

ABSTRACT:

The present invention provides for selection of bovine animals that will display phenotypes associated with increased rates of growth. These phenotypes include hot carcass weight, average daily gain, shipping weight, end of test rib eye area, and adjusted weaning weight which is a measure of post-natal growth, based on the knowledge of their *CRH*, *POMC* and *MC4R* genotypes. The predictive value comes from the discovery that certain single nucleotide polymorphisms (SNPs) in these genes are linked to higher growth rate phenotypes. Specifically, the phenotypes that correlated with specific SNP's are end-of-test rib-eye area, adjusted weaning weight, average daily gain, shipping weight and hot carcass weight. The invention also provides novel kits that can be used in making the determination of these genotypes. The invention further provides for methods of screening bovines to predict which animals will have higher growth rate, allowing producers to selectively breed and manage animals based on desired characteristics, thereby maximizing productivity and profitability in commercial meat production operations.